IN THE CLAIMS:

Claims 2, 6, 7, 15, and 29 were previously cancelled. None of the claims have been amended herein. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as previously amended.

Listing of Claims:

1. (Previously presented) An insulating material for a rocket motor that consists essentially of at least one cured elastomer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent.

2. (Cancelled)

3. (Previously presented) The insulating material of claim 1, wherein the vapor-grown carbon fibers have an average diameter of from about 0.1 micron to about 0.8 micron.

4. (Original) The insulating material of claim 3, wherein the average diameter of the vapor-grown carbon fibers is about 0.2 micron.

5. (Previously presented) The insulating material of claim 1, wherein the vapor-grown carbon fibers have an average length of from about 50 microns to about 200 microns.

6. (Cancelled)

7. (Cancelled)

8. (Previously presented) The insulating material of claim 1, wherein the at least one cured elastomer is formed from a precursor composition comprising at least one crosslinkable polymer.

9. (Previously presented) The insulating material of claim 8, wherein the at least one crosslinkable polymer comprises between about 55 weight percent and about 70 weight percent of a total weight of the insulating material.

10. (Previously presented) The insulating material of claim 8, wherein the at least one crosslinkable polymer is selected from the group consisting of an EPDM terpolymer, polybutadiene, polyisoprene, poly(acrylonitrile-co-butadiene), a precursor of natural rubber, and mixtures, combinations, copolymers, terpolymers, or blends thereof.

11. (Previously presented) The insulating material of claim 1, wherein the at least one cure agent comprises a sulfur-containing cure agent.

12. (Original) The insulating material of claim 1, wherein the insulating material is formulated to have a perpendicular and a parallel elongation of greater than 30%, a parallel tensile strength of greater than 1000 psi, and a tear resistance of greater than 170 pli.

13. (Original) The insulating material of claim 1, wherein the insulating material is formulated to have a volume resistivity between about 5×10^9 and 5×10^{14} Ohms·cm.

14. (Previously presented) A method for making an insulating material for a rocket motor, comprising:

providing a composition that consists essentially of at least one crosslinkable polymer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent;

dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer; and

crosslinking the at least one crosslinkable polymer to form a cured elastomeric insulating material having the vapor-grown carbon fibers dispersed therein.

15. (Cancelled)

16. (Previously presented) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer comprises dispersing vapor-grown carbon fibers having an average diameter of from about 0.1 micron to about 0.8 micron in the at least one crosslinkable polymer.

17. (Previously presented) The method of claim 16, wherein dispersing vapor-grown carbon fibers having an average diameter of from about 0.1 micron to about 0.8 micron in the at least one crosslinkable polymer comprises dispersing vapor-grown carbon fibers having an average diameter of about 0.2 micron in the at least one crosslinkable polymer.

18. (Previously presented) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer comprises dispersing vapor-grown carbon fibers having an average length of between about 50 microns and about 200 microns in the at least one crosslinkable polymer.

19. (Previously presented) The method of claim 14, wherein providing a composition that consists essentially of at least one crosslinkable polymer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent comprises providing a composition comprising at least one crosslinkable polymer selected from the group consisting of an EPDM terpolymer, polybutadiene, polyisoprene, poly(acrylonitrile-co-butadiene), a precursor of natural rubber, and mixtures, combinations, copolymers, terpolymers, or blends thereof.

20. (Previously presented) The method of claim 14, wherein providing a composition that consists essentially of at least one crosslinkable polymer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent comprises providing a composition including the at least one crosslinkable polymer, the vapor-grown carbon fibers and a sulfur-containing cure agent.

21. (Previously presented) The method of claim 14, wherein crosslinking the at least one crosslinkable polymer to form a cured elastomeric insulating material comprises crosslinking the at least one crosslinkable polymer to form a cured elastomeric insulating material formulated to have a volume resistivity between about 5×10^{9} and 5×10^{14} Ohms·cm.

22. (Previously presented) The method of claim 14, wherein crosslinking the at least one crosslinkable polymer to form a cured elastomeric insulating material comprises crosslinking the at least one crosslinkable polymer to form a cured elastomeric insulating material having a perpendicular and a parallel elongation of greater than 30%, a parallel tensile strength of greater than 1000 psi, and a tear resistance of greater than 170 pli.

23. (Previously presented) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer comprises dispersing the vapor-grown carbon fibers under substantially solvent-free conditions.

24. (Previously presented) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer comprises dispersing the vapor-grown carbon fibers in the absence of an organic solvent.

25. (Original) The method of claim 14, wherein dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer comprises substantially homogeneously dispersing the vapor-grown carbon fibers in the at least one crosslinkable polymer.

26. (Previously presented) The insulating material of claim 1, wherein the vapor-grown carbon fibers have a graphitization index of from about 30 weight percent to about 65 weight percent.

27. (Previously presented) The insulating material of claim 1, wherein the vapor-grown carbon fibers comprise not more than 30 weight percent of a total weight of the insulating material.

28. (Previously presented) The insulating material of claim 1, wherein the vapor-grown carbon fibers comprise at least 10 weight percent of a total weight of the insulating material.

29. (Cancelled)

30. (Previously presented) The method of claim 14, wherein providing a composition that consists essentially of at least one crosslinkable polymer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent comprises providing a composition that comprises at least 10 weight percent of the vapor-grown carbon fibers in a total weight of the cured elastomeric insulating material.

31. (Previously presented) The method of claim 14, wherein providing a composition that consists essentially of at least one crosslinkable polymer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent comprises providing a composition that comprises not more than 30 weight percent of the vapor-grown carbon fibers in a total weight of the cured elastomeric insulating material.

32. (Previously presented) The insulating material of claim 1, further including at least one of at least one plasticizer, at least one processing aid, at least one pigment, at least one bonding agent, carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc.

33. (Previously presented) The method of claim 14, wherein providing a composition that consists essentially of at least one crosslinkable polymer, vapor-grown carbon fibers, at least one secondary polymer, at least one tackifier, at least one antioxidant, carbon black, at least one cure activator, at least one cure accelerator, and at least one cure agent comprises providing the composition that further includes at least one of at least one plasticizer, at least one processing aid, at least one pigment, at least one bonding agent, carbon fibers, polybenzoxazole fibers, polybenzimidazole fibers, aramide fibers, ceramic clay, and talc.